

## CLAIMS

What I claim as my invention is

1. Any fluidic array device comprising an assembly of a fluidic chip and a substrate containing a pre-defined molecular array, the said fluidic chip and the said substrate having been fabricated separately.
2. A method for analysis of a sample involving use of a device of claim 1.
3. A device of claim 1, comprising the said substrate contains a molecular array of polynucleotides.
4. A device of claim 1, comprising the said substrate contains a molecular array is an array of polypeptides.
5. Any fluidic chip that is assembled with a substrate containing a pre-defined molecular array, to fabricate a fluidic device of claim 1.
6. Any substrate containing a pre-defined molecular array that is assembled with a fluidic chip, to fabricate a fluidic device of claim 1.
7. Any method of sample analysis comprising the insertion a substrate containing a pre-defined molecular array in to a fluidic chip to create a fluidic device of claim 1 for further processing or analysis of molecular array.
8. Any method of sample analysis comprising the removal of a substrate containing a pre-defined molecular array from a fluidic device of claim 1 for further processing or analysis of molecular array.
9. A molecular array of claim 6 comprising array elements are circumferentially around the substrate.

10. A molecular array of claim 6 comprising more than one substrate such that the array elements are distributed in two space dimensions.
11. A device of claim 1 comprising an assembly of a fluidic chip and a substrate containing a pre-defined molecular array where the array substrate is not fully enclosed in the fluidic chip.
12. A device of claim 1 comprising an assembly of a fluidic chip and a substrate containing a pre-defined molecular array where the array substrate is fully enclosed in the fluidic chip.
13. An array of claim 6 comprising a light source to introduce excitation light for detecting the level of fluorescence on the array elements.
14. An array of claim 10 comprising one or more light sources to introduce excitation light for detecting the level of fluorescence on the array elements.
15. Any molecular array comprising a substrate more than 1 cm. in length and cross-sectional area of less than 1 mm<sup>2</sup>, the said substrate containing a pre-defined depositions of molecules on its surface along its length.
16. A molecular array of claim 15, comprising the depositions of molecules are circumferential.
17. A molecular array of claim 15, comprising the depositions of molecules on the surface of the substrate consist of different species of molecules on different aspects of the cross-section.
18. A molecular array of claim 15, comprising the substrate is an optically transparent material and is used for transmitting excitation light to the array elements.

19. A method for the use of a molecular array of claim 15, comprising the array is used in combination with a microtiter plate.
20. A two-dimensional array of claim 10 comprising the elements deposited on each constituent substrate are different.